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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/851,465	05/05/1997	EDGAR C. ROBINSON	INT21246	5986

7590 12/30/2002

JOHN RUSSELL UREN
STE 202
1590 BELLEVUE AVE
WEST VANCOUVER, V7V1A7
CANADA

EXAMINER

COCKS, JOSIAH C

ART UNIT	PAPER NUMBER
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3743

DATE MAILED: 12/30/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

08/851,465

Applicant(s)

ROBINSON ET AL.

Examiner

Josiah C. Cocks

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/23/02.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Receipt of applicant's amendment filed 10/23/02 is acknowledged.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Nutten et al.* (US # 3,428,406) (hereinafter "*Nutten*") in view of *Reichhelm* (US # 3,361,183).

Nutten discloses in Figures 1-32 a liquid fuel burner assembly comprising an air aspirated nozzle (40), a compressor to provide air under positive pressure to the air aspirated nozzle, a zero pressure regulator (60), a fuel supply tank to supply liquid fuel in liquid form and at ambient pressure to the air aspirated nozzle, the fuel entering the nozzle under negative pressure created by air entering the air aspirated nozzle under positive pressure, a manual isolation valve (58), a fuel control valve (110) configured to control liquid fuel supplied to the burner nozzle based on the air flow to the nozzle such that fuel flow is halted in the event of failure of the air flow, and pressure actuated arrangements for controlling flow of liquid fuel to the burner (see col. 9, lines 14-34).

Nutten possibly does not disclose a manual metering valve interposed between the liquid fuel supply and air aspirated nozzle which is adjustable during operation of the burner assembly or that the burner is an infrared burner.

In regard to the limitation that the burner is an infrared burner, this limitation is considered merely a statement of intended use, adding no structural limitations to the claims, and has not been given any patentable weight. Further, the burner of *Nutten* would be capable of functioning as an infrared burner.

Reichhelm teaches a liquid fuel burner having manual air control (34) and liquid fuel control (22) valves, wherein during operation of the burner these valves are arranged to control/meter the fuel flow and the air flow in accordance with desired flame settings (see col. 6, lines 1-4).

Therefore, in regard to claims 1-8, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the fuel control valve of *Nutten* to

incorporate the metering/controlling mechanisms of *Reichhelm* for the desirable purpose of controlling air and fuel ratio such that desired characteristics of burner performance may be achieved (see *Reichhelm*, col. 5, lines 54-57) and a safety hazard may be prevented from occurring (see *Nutten*, col. 9, lines 28-34).

Response to Arguments

5. Applicant's arguments filed 10/23/02 in regard to the rejection incorporating *Nutten et al.* combined with *Reichhelm* have been fully considered but they are not persuasive. Applicant contends on page 3 of the response that in the *Reichhelm* reference the fuel is gasified prior to delivery to the nozzle and therefore the added limitation that the liquid fuel is introduced to the air aspirated nozzle in liquid form is sufficient to distinguish applicant's invention over the *Reichhelm* reference. However, it is noted that that applicant has not argued that the *Nutten et al.* reference does not disclose that the fuel is introduced to the air aspirated nozzle in liquid form, and, as shown at col. 4, lines 42-56, the *Nutten et al.* reference does show that liquid fuel is supplied to the air aspirated nozzle (40) in liquid form from the liquid fuel supply without undergoing gasification. *Reichhelm* is not relied upon to show such a limitation and instead is relied upon to show that that manual isolation valve of *Nutten et al.* (58) may be modified to be a manual metering valve as shown in *Reichhelm* for adjusting the amount of fuel supplied to a nozzle during operation of a burner for the desirable purpose of obtaining desired flame settings (see *Reichhelm*, col. 6, lines 1-4). Further, *Reichhelm* acknowledges that it is known in the prior art that liquid fuel may be supplied to an air aspirated nozzle in liquid form but describes that when this liquid fuel is supplied in a liquid state the fuel does not sufficiently combine with

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the air to create an optimum combustion efficiency (see *Reichhelm*, col. 1, lines 45-56).

Reichhelm proposes gasification of the fuel in order to alleviate this perceived problem of non-optimum combustion efficiency (see *Reichhelm*, col. 2, lines 27-33). However, in *Reichhelm* the incorporation of this gasification step is separate from the incorporation of manual metering valves for obtaining desired flame setting which is the teaching of *Reichhelm* relied upon by the examiner.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Josiah Cocks whose telephone number is (703) 305-0450. The examiner can normally be reached on weekdays from 7:30 AM to 5:00 PM.

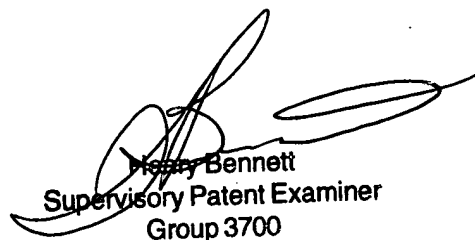
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry Bennett, can be reached at (703) 308-0101. The fax phone numbers for this Group are (703) 308-7764 for regular communications and (703) 305-3463 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0861.

jcc



December 19, 2002



Henry Bennett
Supervisory Patent Examiner
Group 3700